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COMPLICATIONS AND SEQUELLA OF TYPHOID FEVER WITH REPORT OF CASES.*

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Mr. President and Gentlemen: The subject for our study this evening, was, until comparatively recent times, unknown; but is most likely as old as the human race itself. It is needless for me to say it is the complications and sequella of that dreaded disease, Typhoid Fever. The fever itself was not clearly recognized until well into the Eighteenth century as a distinct disease. From 1813 to 1850 covers the modern discussion of the fever itself. Sinsce that time much has been written and much discussion has taken place concerning the complications and sequella of the disease. Typhoid is seen in the warm climates of most if not all the civilized nations of the world. It is occasionally seen in cold climates. It is seen in the mountains as a rule, but we see it in the bottoms and valleys also. By far the larger number of cases occur in the mountains, and it is here we see most of the complications and sequella of the disease. As typhoid is endemic and frequently becomes epidemic in our midst, we should be very careful in our observations when we are called to treat a case. A leucocyte count should be made at least once each week in every case and when

*Read before the Jefferson County Medical Society.

the count is ten thousand or more we should look for complications, as they rarely go this high in an uncomplicated case. The complications are varied and many. I doubt if there is a year in which most every practitioner in the city does not see one or possibly several cases of either complications or sequella which covers a large and varied field. In order that we may keep the terms "complications" and "sequella" well separated, it might be well to ask ourselves what is a complication and what a sequella?

A complication is a disease occurring during the course of some other disease, and dependent either directly or indirectly on the primary disease, while a sequella is a disease or abnormal condition following an attack of some other disease and depending either directly or indirectly on the primary disease. Thus it will be seen that, as a rule, the two conditions can be separated with comparative ease and accuracy, as the former comes up during the attack, while the other follows. The two conditions may be well divided into two classes, viz.: the medical, or expectant, and the surgical, or curative. Of the former I shall have but little to say. The treatment is directed at the symptoms and keeping the patient quiet and trusting to nature to do the rest. This treatment is well illustrated in the treatment of the diarrhoea, constipation, vomiting, cough, pneumonia, local conditions, periosteal lesions, skin abscesses, etc. With this brief mention I will now take up the other side of the disease, viz.: the surgery of typhoid. This field has received as much attention probably in the past twenty years as any field of surgery, and during that time has saved many lives which would otherwise have been lost. Since the days of asepsis and anaesthesia we have learned to do much for those cases which was up to that time utterly hopeless.

Probably 60 per cent. of all complications of typhoid comes up during the second week of the disease, or the beginning of the third week, while a small per cent. comes up during the first week and the latter part of the third and early part of the fourth weeks are between the two. Possibly 80 per cent. of all sequella comes up during the fourth week, or fifth week, while the remainder comes on later. During the first week we see such complications as pneumonia and diarrhoea, but these may be delayed until later. Toward the end of the second week we see a large per cent. of such complications as haemorrhage, perforation, pyelitis, perinephritis, thrombosis followed by abscesses or possibly gangrene, when it comes up as a complication. During the third and fourth weeks we have such complications as abscesses of the liver, gall bladder, spleen, skin, meningitis, empyemia, peranchymatous inflammation of the kidneys and cystitis, and neuritis. At the end of the first week, ulceration of the pharynx, larynx and oesophagus usually occurs when it occurs at all, and is a very serious complication.

A hoarse, low rasping voice should always lead to immediate examination of the larynx. The ulcers usually occur on the posterior wall at the insertion of the cords, at the base of the epiglottis and as a rule extend to the ary-epiglotidean folds. Haemorrhagic infarction may occur and when it does is a very serious complication. Diphtheritic inflammation of the pharynx and larynx are not uncommon. Ferunculosis is a common condition in the fourth week of the disease and I have seen this one complication prove to be a serious one. The socalled bed sores are not common now as in the past since we have learned to prevent them. Meningitis is rare, but I have had one case in my own practice which proved fatal on the fifth day. This was a girl sixteen years of age and came on the 17th day of the disease.

There has been a few cases of thrombosis of the veins of the pia mata which seemed to be the actual cause of death. The condition known as "Aphasia" is most likely an encephalitis. Neuritis of the hands and feet have been common in my practice and has at all times been one of the worst and most unsatisfactory to treat so far as therapeutic results are concerned. I have tried all the known medicinal remedies and have reached the conclusion that medicine is of little or no value. Warm sponge baths with light massage with alcohol has done more for my patients than all medicine combined. This comes up during the fourth week as a rule. Cystitis is another condition which is rare, but when it occurs may prove to be one of the most annoying conditions we are called to treat. I have a lady now under treatment who had typhoid seven years ago and this condition came on during the third week and has been persistent ever since. Permangonate of potash 1-1000 seems to be accomplishing the desired end. The periosteum or bones themselves are frequently affected. Those of the lower extremities are affected twice as often as in all other parts of the body combined. However this is a sequella and not a complication as a rule. The joints may become affected and are of two varieties. The polyarticular which may assume either a rheumatic or a pyaemic form. Secondly, the monarticular form with a general inflammation of the joint. One such case occurred in my own practice which is given in detail under report of cases. Endocarditis, pericarditis and abscess of the heart comes during the latter part of the third week or during the fourth week. What I have been able to find in the literature is given further on.

Typhoid septicemia is occasionally met with and is always a serious complication, in fact will end the life of the patient in no less than 50 per cent. of all cases. Heart failure ended the life of one of my patients, that of a lady, age fifty-two, white. She had what might be termed a malignant case and the heart began failing on the third day

and refused to respond to any stimulation I could use on the tenth day. I think, however, she had a fatty heart previous to the attack of fever. This is the only case occurring in my own practice. Of the glandular system the parotid is the one affected oftenest. Parotid abscesses have occurred in more than 5 per cent. of my own cases. Some of them will be reported later. Ulceration and haemorrhage of the stomach has not been uncommon in my own practice. I have had one abscess of the liver and one case of gall stones due to typhoid. Five cases of perforation have occurred in my own practice. I have also seen a few cases of jaundice, none of which proved fatal, the skin clearing up in from a week to ten days. So far, I have been unable to find any mention of an aneurism due to typhoid. All authorities I have consulted mention arteritis, but aneurisms are conspicuous by their absence. One such case occurred in my own practice, being in the left common carotid at its bifurcation, the details of which is given in full under the head cases. With this brief mention of the complications and sequella I will pass to the study of the different pathological conditions occurring in the different parts of the body and the differtnt structures. This can be done best in a systematic way and we will study first that very serious condition known as Gangreen. Many standard works on surgery do not mention gangreen following typhoid fever, and when we consult such works as "Treves, Dennis, Park and others" we are disappointed. In 1857 Bourgeois and Bourguet, first called serious attention to this serious condition, while Gigon called attention to it in 1861 and again in 1863. In 1863 Patry confirmed these observations. Bourgeois and Bourguet were the first to demonstrate by autopsy the fact that gangreen was due to arterial obstruction, but they thought it a coincidence rather than a consequence of the fever. Since that time many cases have been reported from different parts of the civilized world. For the past thirty-five years the profession has been looking for it in cases of fever.

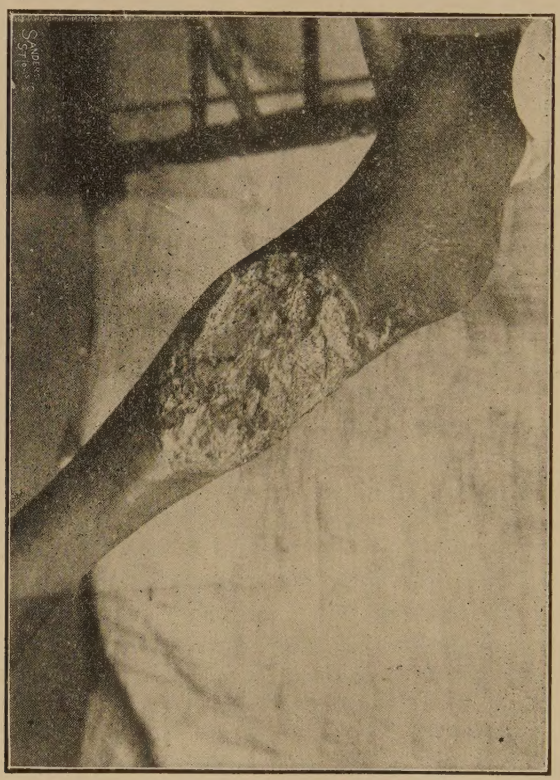
Gangreen is either a late complication or an early sequel to typhoid fever. Fortunately it is rare. Neither Murchson or Flint mentions it. Holscher, who observed nearly 2,000 fatal cases, does not mention a case, but Bettke, in 1,420 cases, mentions four cases all confined to the toes. Bone lesions occur much oftener than does gangreen. Dr. Keen, of Philadelphia, has collected 205 cases of bone lesions to 133 cases of gangreen. Holscher reports 59 cases of thrombosis of the femoral vein in his series. Dr. Westcot has collected 90 cases of gangreen, 76 of which was due to typhoid. Keen says: "That 39.2 per cent. of all cases occur during the second and third weeks of the fever." The explanation may be found in the fact that the resistance of tissues are much lowered and the toxines are well diffused

and the bacilli are plentiful and active. Dr. Keen reports one case in detail which was due to venous thrombosis, and set up a Phlegmasia Alba Dolens. The case is an interesting one and I give you his report of the case:

"E. C. Milford, Del., age 42, first consulted me July 9, 1897, at the instance of Dr. Marshall. He is an exceedingly large, stout man, who six years ago had an attack of typhoid fever. During his convalescence phlegmasia developed in the left leg, from which he has suffered ever since. The leg is still swolen, especially from the knee down, is very tense, hard and brawny, is covered with crust of exudation, and subject constantly to small ferunculosis and the formation of small ulcers and occasionally of distinct abscesses. One of these, above the internal maleolis, was opened about six months ago and has never healed. At this site there is a small crater, one cm. in diameter, going through the entire thickness of the skin to the muscular tissues, and the seat of an exceedingly foul discharge. The itching of the limb also annoys him very much. I directed him to foment the leg sufficiently to take all the crust off, and then to apply an ointment of resorcin, 30 grains to the ounce. Under this treatment he rapidly improved, and was soon entirely well."

Symptoms. These are marked and characteristic. Should the case be one of either arterial embolism or venous thrombosis, and the case be running the ordinary course along toward the end of the third week as a rule there is sudden, severe and persistent pain, soon becoming localized in any of the extremities, followed by numbness, cold chilly feeling and sometimes loss of motion it is almost pathognomonic of gangreen in that part. In a day or two a well defined line of demarcation will be formed, with the usual symptoms of gangreen. Age nor sex seems to have but little if anything to do with typhoid gangreen. Dr. Keen, in his "Tonor" lecture delivered in 1876, reported 113 cases, and since that time Dr. Westcot has collected 90 cases, making a total of 203 cases. From this he deducts 34 cases reported by Estlander, of Findland, they being due to special local causes. Of the remaining 169 cases 115 were due to typhoid and 40 to typhus. Of 155 cases the ratio was about three males to two females, this being in direct contrast to the statement above. The site of gangreen is more striking than age or sex. Dr. Keen gives the following table: Ears, 6 cases; arms, 5; nose, 10; genitals, 21; face, neck and trunk, 47 and the legs 126. Thus it will be seen that it occurred 89 times in all parts of the body combined except the legs where it occurred 126 times alone. If gangreen be due to arterial obstruction it seems that it may be about evenly divided, but if it is due to venous obstruction there is a marked diffference. Keen gives a table of 46 cases of ar-

terial gangreen occurring as follows: Both sides, 8; right side, 19; left side, 19. This shows an even balance. The venous is different, viz: both sides, 4 cases; right side, 10; left side, 38, making a total of 52 cases. Of 47 cases in which there was no gangreen it was as follows: Both sides, 3 cases; right side, 13; left side, 31. I believe that the general debility of the patient, the slow sluggish circulation, the tendency of the blood to coagulate, the diffusion of the toxines, the action of the bacilli, the great distance from the heart and the possible compression of the left Iliac vein by the right common Iliac artery all have something to do with this great difference. The following cases have occurred in my own practice:



Cut No. 1 shows the condition of the gangrenous process in case No. 2. The smooth surface near the upper edge shows the exposed tibia. The heavy line like appearance in different parts of the ulcer is the branches of the internal safenous vein, which had become hard cords. They were removed later with a pair of scissors. Under antiseptic, simulating treatment the ulcer healed in three months.

Case 1. Mr. Jim J., white, age 40, had typhoid three years ago when he consulted me in June, 1897, for a large gangreenous ulcer on the lower third of each leg. They were partially covered with a

brown crust and occasionally would break down in small abscesses and discharge a very foul smelling pus. They first made their appearance during convalescence from the fever. They would not heal notwithstanding the fact that he had used many local remedies of his own and that of several physicians. A bacillus was isolated which filled all the requirements of the typhoid bacillus. They were thoroughly curetted and kept clean and a rubber bandage applied over the dressings, when they healed in about two months. The internal savenious vein had been occluded in this case.

Case 2. Mr. W. G., white, age 25, consulted me in May, 1900. He had a very large, foul ulcer on both legs extending from the upper third of both legs to near the ankle joints. Each were practically covered with a brown hard crust, which, when removed, left an ugly ulcer, and bled very little. After much patient work I isolated a bacillus which gave all the requirements of the typhoid bacillus. He had typhoid in 1896. His temperature run from normal to 102F. at times, which was due to a mixed infection. All the veins on the inside of the legs were hard cords above the ulcers. I advised operation but he refused and in a few months passed from my observation in this condition.

Case 3. Mr. J. W., age 34, white, consulted me in February, 1897, for a large ulcer on the left leg located on the front and inner side on the lower third of the leg. Had typhoid eleven years ago. It was very painful and incapacitated him for work. Three years ago had an operation done on the right leg for a similar condition which begun during convalescence, with good results. The present trouble began two or three months after the fever. The entire surface was curetted, also the bone, a dry dressing applied and a rubber bandage over this, when it healed in three weeks.

Case 4. John J., black, age 52, had typhoid fever in 1899, and consulted me in August, 1900 with a gangreenous condition of the entire ankle joint and extending up to the middle third of the leg. The trouble began before he was able to walk from the fever. Temperature 102F., pulse 120. The condition had been getting worse for two weeks previous to this. Positively denied ever having had any specific trouble. No bacteriological examination was made, but an amputation was done at once to save the life of the patient. He was much emaciated, but rapidly improved and was soon entirely well. There was no tubercular trouble.

Case 5. Mr. R. G. D., age 23, white, had typhoid in July, 1900, and consulted me in September, 1901, for an ulcer on the left leg about

three inches above the ankle joint and on the inner side of the leg, which he noticed about the time he began sitting up from the fever. At times it would crust over and then would become raw again. He had tried many tonics and local remedies with no satisfactory results. I curetted the entire surface, applied a dry gauze dressing and a rubber bandage over this. It healed in three weeks.

I believe that if we would be more careful we would find at least 75 per cent. of all ulcers on the legs of the caucasian race following fever, when we exclude traumatism and specific troubles.

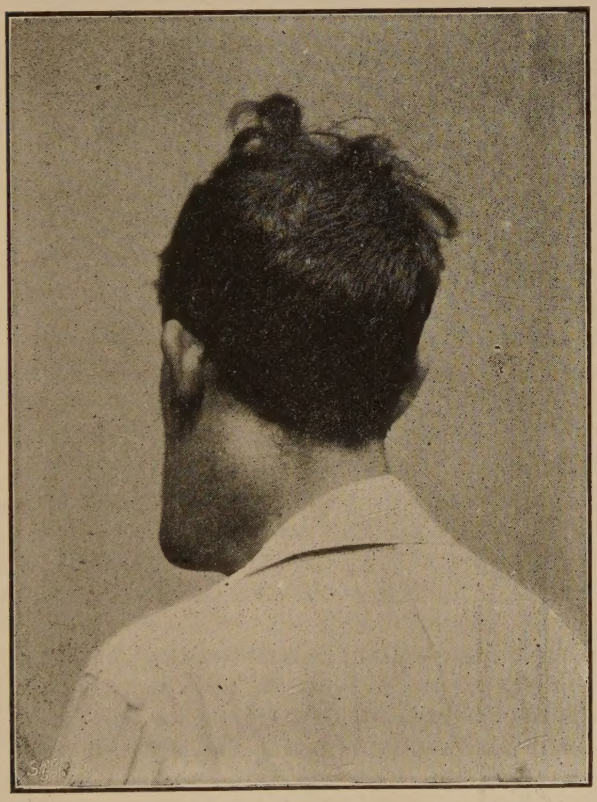
Joints. The hip, knee, shoulder and elbow are probably affected oftener than any of the larger joints and in the order named. But in the study of the body as a whole we will probably find more cases by number of the smaller joints. There is a typhoid artehritis, which probably occurs more frequent than any other form. There is also a rheumatic variety and a septic variety. Much could be said on this line, but time will only permit me to report the two very interesting cases which occurred in my own practice.

Case 1. T. S., colored, age 48, male, was convalescent from typhoid and had been ill with the disease for five weeks. When all was going well, as I thought, he was taken with a severe pain in left ankle joint. General enlargement of the joint soon followed and pus formed in four days. This not only involved the joint itself, but the tissues about it. The circulation seemed to be entirely occluded. Amputation was done to save the life of the patient. I found not only the soft tissues involved, but the bony structures as well. All the treatment recommended was used without the slightest effects. He made an uneventful recovery in a short time.

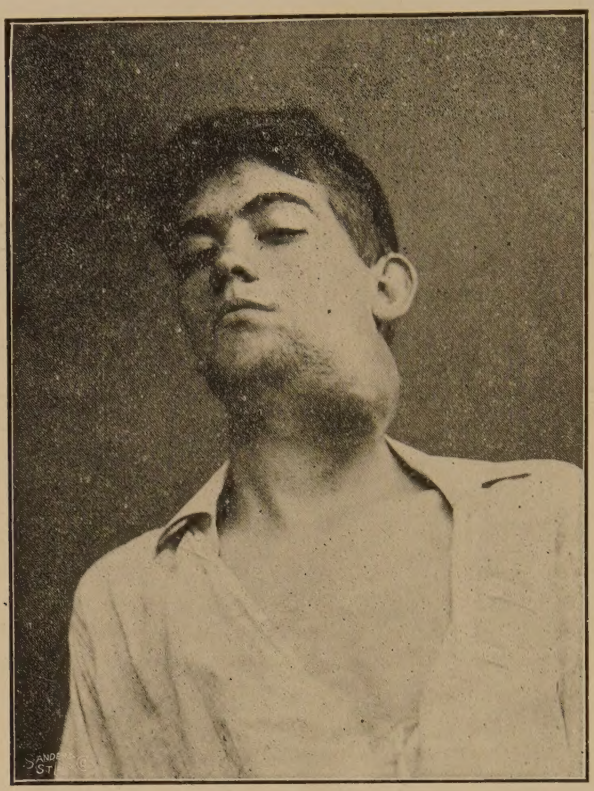
Case 2. Mr. R. G., male, white, age 30. Previous family and personal history good. I had treated him through a four weeks' spell of typhoid, which ran the usual course. In the fifth week of the disease (second week of convalescence), he was suddenly taken about 2 o'clock a. m. with an excruciating pain in the left knee joint. It was necessary to resort to morphia frequently. He had had several attacks of acute inflammatory rheumatism previous to this. The joint looked like rheumatism and I thought the condition was due to that trouble for two or three days. On the fourth day it was evident to me that there was pus in the joint and operation was advised. He consented at once and it was done in the afternoon of the same day. Two openings above and below the joint, both internally and externally was made also the same behind and one directly behind the joint and all leading into the joint. About one pint of pus was evacuated

and through and through drainage put in. I had little hope for the limb and but little for him, as he was in a very serious condition. It was dressed two to three times in the twenty-four hours for four weeks, when he began to convalesce. He not only got well, but to my great surprise had a joint which he used fairly well at the end of one year. A pure culture was taken from the pus which was identical morphylogicly with the bacillus typhosis and gave the widal reaction with typhoid blood. The temperature ran from 102F. to 104F. Pulse from 110 to 140. This case occurred in October, 1898. This one case shows how futile drugs are and how much can be accomplished by surgery.

ANEURISM.



Cut No. 2 shows the front view of the aneurism case on August 1st. It shows well the enlargement of the entire side of the neck.



Cut No. 3. This shows the outward projection of the tumor, the remarkable sharp point of outward and downward projection and the enlargement behind the left ear which is not shown in Cut No. 1. At times there was a bruae over the enlargement behind the ear in the absence of one elsewhere. It was likely filled with a clot in the larger part of the sack.

Case 1. Mr. Bud C., age 18, white, was taken the first of April, 1898, with a typical case of typhoid. I saw him first on April 10th, temperature 103, and pulse 100. Abdomen tynponitic, very tender, profuse diarrhoea, great thirst, a hacking cough, some nausea and vomiting, nose bleeding, and a typhoid rash. I gave him 1-30 grain strychnine every four hours and five grains sulphocabolate of zink every three hours and wrapped him in an ice sheet which was changed every few minutes for several hours, as it was impossible to give him the tub baths in the home (I should have added that he was also delirious). Under this treatment he rapidly improved and in twenty-four hours was comfortable. Temperature run from 101 to 102 1-2F. and pulse 80 to 100, until April 25th, when it began to go down by lysis and by May 5th, the temperature was normal. On May 7th,

there was a slight swelling and tenderness of the left parotid gland. Ice packs was used freely, but the inflammation gradually increased until the 12th, there was a small abscess which pointed at back of left ear. This was opened by a small incision which just extended through the skin. An antiseptic dressing was applied and changed every second day for the next week, when the abscess was entirely healed. I did not see him again until June 15th, when he came to me for treatment of a small nodule two inches below the angle of the left inferior maxillary. On careful examination I found the parotid gland still rather large and tender and the small tumefaction seemed to be attached to it. There was a hoarse rasping cough which worried him very much at times, but had not given him any inconvenience otherwise. With the stethscope I thought I could make out an aneurismal bruet very distinctly. My diagnosis was an aneurism of the common carotid at the bifurcation, due to the typhoid bacillus as there was a pure culture obtained from the parotid abscess. I advised operation, which was refused. I put him on the iodides and advised perfect quietude. He took the medicine, but would not remain in bed. The tumor rapidly grew and all the symptoms increased in proportion until July 1st, when I tried the gelatin treatment with the same results I had with the iodides. Two of our local surgeons saw the case at this time and diagnosed an angio-sarcoma. At this time the bruea had disappeared except at times, when it could be heard distinctly. Both advised against operation. Shortly after this time he had all the symptoms given in the text books, with a pulse ranging from 100 to 110 and no fever. By July 15th, the growth had attained immense size. (See photoes.) The accompanying photographs No. 2 will give some idea of the tumor. The tugging was now very clear for the first time. There was very little change for several days except a small place directly over what seemed to be the center of the growth, which became soft and bulged far out. On Aug. 15th, a dark area the size of a bean appeared, and on the 17th, it began oozing a dark blood. A piece of sterile gauze saturated with persulphate of iron was applied and a firm bandage over this. He then wanted an operation done and as his home was not suitable I had him removed to Dr. Copeland's infirmary. He operated and I assisted him on Aug. 18th. All the vessels were ligated on the left side of the neck and face and the tumor opened. It proved to be an aneurism of the common carotid involving both the external and internal carotids, and was fairly well filled with a blood clot. It must have been well filled at times as the bruea could not be heard. He rallied and was bright for several hours, but began to loose strength and died Aug. 20th. The incision could not have injured the vessel since it was not in this

region and was barely through the skin. It was evidently due to the typhoid bacillus as it was obtained in pure culture from the abscess of the parotid, and followed it immediately. Previous personal history could not be questioned and was free from all disease. I have not been able to find such a case reported in the literature.

TYPHOID NEURITIS.

Case 1. Mr. Lee H., age 35, white, had a typical attack of typhoid. Temperature run 102 to 104.5F. for four weeks, pulse 90 to 110. During the fourth week of the disease there was much tenderness of the lower extremities and some anarsarca. In three days there was a violent neuritis of both legs and feet, which lasted for four weeks. Cotton batting was applied and hoops to keep the bed clothing from hurting him. The following week there was a mild neuritis of both hands. All medical treatment was of no avail in this case.

Case 2. Mr. J. W. S., age 48, white, was taken Dec. 11, 1897, had a violent attack of typhoid with three hemorrhages during the third week. There was profuse haemorrhages from the stomach several times after the end of the first week, to well into the third week when they ceased. At the beginning of the fifth week he was taken suddenly with a violent chill which was followed by one degree of fever. They repeated themselves every four to six hours for the next ten days. During this time there developed a violent attack of neuritis of both legs and feet and the right arm and left hand. Medical treatment was tried for the first week, and was doing no good when it was stopped internally and warm baths and alcohol sponges were continued. Improvement was decided in two or three days. It took three months for complete recovery. There is no question but what the neuritis was the cause of the chills in this case. Anasarca was present in both feet from the fifth to the tenth week when it disappeared under tonics, which was begun at the beginning of the ninth week, and after the neuritis was practically well.

Case 3. Mr. S., age 22, white, was taken in September, 1895, with a typical attack of typhoid. It run the usual course until the end of the fifth week. He was taken suddenly with a violent chill which lasted for an hour. The temperature had been normal for the past week prior to this, but now went up to 100F. and remained there for fifteen days. On the third day there was much tenderness of the entire right side of the body. This was very acute on the third day after the chill and proved to be a typical neuritis which lasted for four weeks. Internal medication did no good and warm baths could not be borne. Alcohol sponges were used freely, cotton batting applied and hoops set over the leg and arm. The right hand was practically

paralyzed during the first two weeks of the disease. It was several weeks after the patient was out before the hand could be used.

Case 4. Mrs. M., age 28, white, had a typical attack of typhoid in April, 1896. Run the usual course for four weeks with a temperature of 102 to 104F. At the beginning of the fifth week (or the first week of convalescence), she was taken suddenly with a chill which lasted for an hour, the temperature rising to 101F. The next day there was tenderness of all the extremities. The third day there was a well marked neuritis of both lower extremities. On the fourth day there was a well marked neuritis of the left forearm and hand. So great was the tenderness that I had to apply cotton batting with a light roller bandage and put hoops over the affected parts. All the medical agents were used and the patient gradually grew worse, until the end of the week when everything except styrch. sulph. which was given in 1-30 grain doses every four hours. Warm sponge baths and light massage with alcohol was used every four hours. Under this treatment the hyperaesthesia disappeared in two weeks. The temperature run about the same until the last week when it gradually disappeared. All the other symptoms seen in an ordinary case of neuritis was present in this one.

PERFORATION AND HAEMORRHAGE OF THE BOWELS.

Case 1. Mrs. B., age 72, white, very fleshy. Had never been sick before. Was taken with a typical attack of typhoid May 15th, 1898. Run the usual course for two weeks. On the fifteenth day she was suddenly taken with a violent pain in the stomach followed by syncopy. I saw her in a few minutes and found her moribund, cold and pulseless. With stimulants she gradually grew stronger for eighteen hours, when it was evident that general peitonitis was developing. Her age and general condition prevented me doing anything in the way of an operation in this case. She died on the fourth day, perforation being evident.

Case 2. Mr. H., age 55, white, Scotch. Had never been sick before; was taken May 10, 1896; had a typical attack of typhoid, lasting four weeks. Temperature run from 102 to 104 1-2F., pulse 90 to 110. Diarrhoea very troublesome. By June 5th, temperature normal and he was well on the road to recovery. On the 8th, against positive instructions, he ate half a pint of rice and oat gruel. In about one and one-half hours he was taken with violent pain in the abdomen followed in a few minutes by copious haemorrhages from the bowels. This coould not be controlled and he died in two hours

Case 3. Mr. H., age 30, white, son of Mr. H., preceeding, was taken May 25th, or just two weeks after his father was. Had never been

sick before. The two cases was identical clinically. His case run the same course as that of his father for four weeks to a day. On June 25 (two days after his temperature had been normal he did the very identical thing his father had done only a few days before. About thirty minutes after he had taken the gruel he was suddenly taken with a violent pain in the abdomen followed in a few minutes by a profuse haemorrhage from the bowels. I saw him in a few minutes and at that time he was moribund. He died in less than thirty minutes.

Case 4. Ana J., black, age 70, was taken June 8, 1897. Run a typical course for three weeks, with a temperature ranging from 101 to 104F. On the twentieth day I was called hurriedly to see her. I found that she was having a copious haemorrhage from the bowels. I gave her one-half grain morphia hypodermatically, elevated the hips and applied ice packs. My prognosis was death in a short time and so advised the family. I left and to my surprise I was called to see her the next day for the same thing. The treatment was repeated and again on the third day. She recovered.

Case 5. This was a girl eighteen years of age, the fever running the usual course for three weeks, when she was suddenly taken with violent pain in the abdomen followed by syncopy and the other symptoms usually seen in perforation of the bowels. In six or eight hours she rallied and I advised an operation at once. This was flatly refused, and my prognosis was death in a few hours from a general peritonitis. Morphia was given hypodermatically and ice applied locally for comfort. There was much distention of the abdomen and a high fever for several days when to my great surprise she began to slowly improve and finally recovered. The notes further of the case has been misplaced and prevents me giving all the details. This is the only case in which I have made a diagnosis of perforation in which the patient recovered.

The mortality in perforation when let alone is quite if not 100 per cent. When the diagnosis is made in a few hours and operation done promptly, the mortality will range from 75 to 45 per cent. The degree of mortality depending on the condition of the patient, the amount of shock, the peritoneal toilet and the time the operation is done. It would seem that the best time to operate in the majority of cases is from twelve to eighteen hours after perforation, or as soon as the patient reacts, but there is many exceptions to this for special reasons. The earlier operation is done after reaction, the lower the mortality and the longer, the higher the mortality. It is an easy matter to understand why the mortality is so high and will re-

main so. Still if we can reduce the mortality from practically 100 per cent. to even 60 per cent. by operation we have made a great stride for humanity.

PAROTITIS.

Case 1. Mr. S., white, age 22, had an attack of typhoid in September, 1895. It run the usual course for four weeks when the left parotid gland began swelling and in spite of all treatment formed an abscess. It was opeend in the usual way and healed in a few days.

Case 2. Mr. John B., white, age 20, had an attack of typhoid in August, 1897 which run the usual course for three weeks when I noticed that the left parotid was very much enlarged. In a few hours it became very tenler and in spite of ice and all the medicinal agents known to me it rapidly supurated and on the fourth day I opened it at the posterior edge of the sterno-mastoid muscle and evacuated between one and two ounces of pus. It was kept cleansed in the usual way and healed in a few days.

Case 3. Mr. B. C., white, age 17, had typhoid in May, 1898, which run the usual course for two weeks and three days when the left parotid gland began swelling and on the fifth day I opened it at the posterior edge of the sterno-mastoid muscle. There was probably two ounces of a thick greenish pus evacuated. It healed in one week.

Several other cases have occurred in my practice, but my notes only state that they did not supurate, but the swelling lasted for two weeks and more. The treatment used in all these cases was the same and consisted of ice and the medicinal agents usually recommended in supuration. Personally, I do not believe any medicine is worth anything and ice only gives relief from pain. The specific organism is present and nature either takes care of it or the glands break down and we have an abscess. They have occurred in nearly 5 per cent. of my cases.

I have had the opportunity of watching four cases of specific parotitis (mumps), in those who had been under my treatment for an inflamed parotid previously. Strange to say that neither had any trouble in the gland in which the typhoid parotitis occurred. I have had three cases of typhoid parotitis in individuals who had previously had specific parotitis. It was interesting to note that in none of these did the two inflammations attack the same gland. Whether this is purely accidental or whether one is a check on the other I cannot say. However, it would seem that there must be an antagonism somewhere or the same thing would not have occurred in each case.

GALL BLADDER.

When the gall bladder is affected it is most likely by the bacillus typhosis traveling up through the ducts leading from the liver to the

gastro-intestinal tract. The bacilli may produce an abscess or form a nucleus for a stone, or it may be only a mild catarrhal condition and will disappear in a short time. No doubt the last named is of frequent occurrence. When an abscess is formed there is nothing to do but open it. No drug or local application has any curative power. The same applies when a stone is formed. Last year I operated on a case of gall stones which I believe was due to typhoid infection. The case is as follows:

Miss K., age 57, white, had typhoid fever seven years ago. In the fourth week of the disease she began having severe pains over the region of the gall bladder and has suffered with them more or less ever since. Had never been sick in bed before. Had noticed a swelling in right side at times ever since just below the ribs, and had to go to bed with it. For the past four years had occasional vomiting spells and some fever. I was called to see her on the morning of July 20, 1901, and found her with a temperature of 103 2-5F., pulse 130, feeble and running. She was in a semi-comatosed condition and more or less delirious. There was a very large tumor at McBurney's point and exceedingly tender and she assured me that it had been five days since the present attack began. I made a diagnosis of appendicitis or possibly gall stones. I operated at 2 o'clock p. m. the same day, making the incision at McBurney's point. I found the gall bladder instead of an appendix. It was very much distended and firmly bound to the posterior abdominal wall. With much difficulty I succeeded in stitching it to the anterior wall and then opened it. There was fully a pint of pus evacuated. I then explored it and found a number of large stones as you see. The weight was 375 grains. She made an uneventful recovery except a bed sore which was produced by the carelessness of the nurse placing her on the edge of the bed pan. This taught me to look out for the gall bladder when there was a history of typhoid fever.

ABSCESS OF THE LIVER.

Case 1. Mrs. W. A. M., age 32, white. I saw this case with Dr. Cooper, of this city, Oct. 1, 1901. She had been suffering with typhoid for two weeks previous. Had aborted at the fourth month the day before. I was called to clean out the uterus which I did and again the following day. She had all the symptoms we see in any one case of typhoid, otherwise I did not see anything out of the usual in the case. On the 17th, I was called to see her again with him and found the following condition present: Some vomiting, great thirst, restless, pain in the right side at the edge of the ribs, temperature 103 1-2, pulse 130 to 150, very feeble and running. There was con-

siderable enlargement on the right side at the margin of the ribs and complete flatness from the axillary line, tenth rib to half way between the last rib and the highest point of the ilium and extending to near the median line of the abdomen. In a few hours I saw her again and the temperature was 96 1-2, pulse 150. I aspirated the pleurial cavity and found nothing in it. I repeated this the following day with the same result. My diagnosis was abscess of the liver, or possibly a subdiaphragmatic abscess. Her condition was so serious that operation was deferred until the following day.

I made an incision over the gall bladder and when the peritoneium was reached it was much thickened and of a yellowish tint. When the cavity was opened there was a free flow of a very foul smelling pus. On careful examination I found it was well walled off from the peritoneal cavity, and posterior extended near the crest of the ilium. Seeing that it would be impossible to get the necessary amount of drainage from above, I turned her on the side and made an opening about four inches long between the iliac crest and last rib at the margin of the psoas muscle. Through and through drainage was put in. There was no time for seeing just what the conditions were inside the cavity at that time. Next day I made a careful examination and found that the liver had a large ragged place in it, and there was quite a large piece gone in the lower part of the right lobe just to the right of the gall bladder. It looked as though it had been bitten out. The gall bladder was not affected. Her condition remained very bad for three or four days, when she began to improve and continued to improve very rapidly until the morning of the 17th day. At this time the anterior opening was practically healed and the abscess cavity also. In other words, the condition was all that could be wished for. I had just dressed the wounds and was applying the bandages when she gave a scream and became speechless, followed in a few moments by a heavy cold sweat. She remained in a semi-comatose condition, with cold perspiration and nausea, great thirst, a subnormal temperature, pulse 160 to 180 for 24 hours, when death relieved her suffering. I am not sure just what the sudden change was due to. I think it probable, however, that there was another abscess somewhere which could not be reached, or that had formed after the first one was opened. Or it might have been due to an embolism.

AFFECTIONS OF THE LARYNX.

Personally, I have never had any serious complications of the larynx. Luning gives the most interesting table I have ever seen, and I give it to you in detail, which covers fourteen cases of his own. It is as follows.

Age.	Males.	Females.	Total.
Under 10	4	2	6
10 to 15	7	5	12
			18
15 to 20	30	11	41
20 to 25	56	12	68
			109
25 to 30	25	3	28
30 to 35	3	2	5
Over 35	4	1	5
			38
Total	129	36	165

Thus it will be seen that of 165 cases in this table it occurred 129 times in males and 36 times in females, or a little more than 3 1-2 times as often in the male as in the female. I have seen no explanation offered for this very great difference in the two sexes.

The time of onset is late as a rule, but may occur early, as shown by the following table by the same author:

First week	7 cases
Second week	23 cases
Third week	30 cases
Fourth week to two months	83 cases
Total	143 cases

This table shows that by far the larger number of cases occur either a late complication or come up as a sequela of the disease.

OESOPHAGUS.

I have had no complications in my own practice, but recently Dr. Blake, of Sheffield, Ala., reports a very interesting case of stricture of the oesophagus in a lad of 17 years, who was operated on by Dr. Blair, of that place, four years after an attack of typhoid fever. Fortunately, this complication does not occur very often. I have been unable to get the details of this case.

THE PLEURA, LUNGS AND HEART.

The organs of the chest are very frequently affected in typhoid fever. Probably one of the most frequent affections is pneumonia. This may come with onset of the disease or it may not come until late in

the disease. The lobar form is by far the most frequent. A number of such cases have occurred in my own practice and all have run the usual course, and I will not take your time to report them in detail, but suffice it to say that 80 per cent. of all cases have occurred during the first week of the fever. The remainder during the third and fourth weeks of the fever. It is surprising to see how few die with pneumonia compared with the number of cases in the strong and robust, while in the alcoholics almost every one will die. Sometimes purulent pleurisy occurs, and is always a very serious complication, the death rate being very high.

We may have a purulent endocarditis or pericarditis. I have found only two cases of purulent pericarditis recorded and one of abscess of the walls of the heart, all of which was found at autopsy. We should not forget that gangrene and abscesses of the lungs occasionally occur.

STOMACH.

There may be a fatal hemorrhage from the stomach at any time during the disease. In my own practice I have had two cases of hemorrhage, but both made a good recovery. One occurred during the first week of the fever and continued at intervals for ten days. The other during the second week and two succeeding days during the same week. Many cases are reported in the literature, and I cannot take up your time with their reports.

MALARIA.

Case 1.—Mrs. D., white, age 24, had been living in S. W. Georgia for two months previous to present illness. I saw her on July 19, 1900, and she had been sick four days, with the following history: Had a chill each day between 8 and 9 o'clock a. m., followed by high fevers until late in the afternoon. Perspiration was very free, with nausea and vomiting and diarrhoea. She was very nervous, temperature 105F., pulse 130, no tenderness over abdomen, but considerable tympany, a brown, trembling tongue, very small quantities of urine, highly colored, very restless, great thirst, eyes yellowish, and all the blood vessels injected. Blood was examined at once, and the quotidian type of the plasmodium malaria found in almost every field of the microscope. The next day I expected to put her on quinine, but was called out during the night and did not get to do so. She missed her chill, and I thought I would not give it unless she had another chill. As she did not have any more I did not give it at all. She developed a typical case of typhoid fever and at the end of the first week I failed to find any plasmodium. She ran a typical course for four weeks, and made an uninterrupted recovery, and had no more chills and no quinine.

Case 2. Mr. Leslie, white, age 32. Saw him first in July, 1897, with a temperature of 104F., pulse 120, vomiting, bowels very loose and some tenderness; diarrhoea, loss of appetite, a brown, trembling tongue, had had a chill every day between 9 and 10 o'clock a. m., followed by vomiting and sweats for three days. He had been in the Mississippi Bottoms for some time, and I examined the blood at once and found the quotidian type of the plasmodium malaria without any trouble. I prescribed 40 grs. of quinine sulph. to be taken the next morning at 4 o'clock. The vomiting was so persistent that he did not take it, but missed his chill and I did not give it then. He had no more chills, but developed a typical case of typhoid fever which ran the usual course. He did not get any quinine after the fever and had no chills. These two cases show very clearly that we may have a malarial infection where typhoid has begun, and is in accord with the statement of Ewing, who says: "After the first week, when the typhoid fever has become fully established, active sporulation of malarial parasites is exceedingly rare." In these two cases the typhoid either cured them or they got well without any treatment whatever.

MENINGITIS.

Case 1.—Miss A. B., white, age 17, was taken with a typical attack of typhoid in June, 1897, which ran the usual course for two weeks with a temperature ranging from 101F. to 103F. On the 17th day she began complaining of pain in back of head and neck, but on careful examination I could not find anything to account for it. I was called in a few hours very hurriedly to see her and found some of the symptoms of meningitis. In about thirty hours from the time she had begun complaining of the pain in the neck she had developed a typical attack of meningitis. It ran a usual course with all the symptoms we see in any one case until the fifth day, when she died in a convulsion. During the last twenty-four hours there was almost complete suppression of urine.

APPENDICITIS.

This may occur during an attack of typhoid. It is, however, rare, but if it should occur the treatment is the same as in an attack when there is no fever. It should be remembered that we have much tenderness in the region of the caecum in many cases of typhoid and we should be very careful in arriving at a definite conclusion, but should not lose any time in doing so.

CONCLUSIONS.

1. Medicinal agents are of little or no value in the primary attack and the treatment is only palliative.

2. That medicinal agents are of no value in either the complications or sequella, except to comfort the patient.

3. That in either the complications or sequella whatever may be accomplished will be done either by nature or by surgery.

4. That the typhoid bacilli as a rule are distributed through every tissue in the human economy. That it may attack any part of the economy at any time, but oftener waits until the patient is run down from the primary disease and the results are oftener a sequella than a complication, and it has no choice in the tissues it attacks. That it may be some time before it asserts itself in any particular locality. That the local condition may get well in a short time or it may never do so unless we assist nature.

5. That when the infection is due solely to the typhoid bacillus, any complication will as a rule run its course with but little if any elevation in the temperature, while if it is a mixed infection it will run the course with more or less fever, and may be, with chills, fevers and sweats. That we should not be surprised to find the worst complications in the mildest cases. That we should feel much gratified to have no complications or sequella in the worst cases.

6. That owing to the long duration of the disease as a rule we have a fertile field for any and all kinds of surgical diseases. That the lower extremities are affected three or four times as often as is the case in all other parts of the body put together.

7. That all complications are either directly or indirectly due to the typhoid bacillus. That no known medicinal agents have any effect on the typhoid bacillus internally. That when it attacks any tissue locally the only way of getting rid of it is either by nature's wise provisions or its removal by mechanical means.

8. That it is no respector of age or sex, rich or poor. However, we see the larger number of cases in the young, as it is here we have the greater number of cases of the disease.

9. That we should never buoy the hopes of the patient on false hopes, but should be plain and frank at all times.

THE DIAGNOSIS AND TREATMENT OF APPENDICITIS.

By J. A. Goggans, M.D.,

ALEXANDER CITY, ALA.

I will not attempt to read a paper on the different forms of appendicitis, nor go into its anatomy, morbid anatomy and etiology, but to say something that will be more practical, and illustrate from my experience the great responsibility that rests upon general practitioners of medicine in the recognition and management of this disease. I say, "general practitioners of medicine" because the majority of cases of appendicitis are seen first by the general practitioners. It may

appear to many that appendicitis is a subject much worn from the great number of articles now being published in our medical and surgical periodicals, but when we think of it in its true light, it comes to be the most frequent, hence the most important serious disease of the intestinal canal. The fact of its being so serious a disease when left to nature and its wide spread prevalence only serves to impress us with the great importance of physicians and surgeons being of one mind as to treatment. This can only be arrived at by both being thoroughly conversant with the pathology of the disease and thereby being mindful of its insidious and treacherous nature. This is the most important part of the subject of appendicitis that confronts us and our failure to recognize the different varieties of inflammations that are found in the appendix at an early date of their existence is the cause of nearly all of the fatality that we have in this disease. I do not wish to have one to infer that I mean that to merely know the pathology would extricate so many of these cases from death. I only mean that it is absolutely necessary for the physician to know how to read the pathology, treatment and progress of appendicitis by thoroughly understanding the meaning of the rational and physical symptoms when met at the bedside. The art of accomplishing this can only be attained by study and experience. In other words no one should ever die of appendicitis. So thoroughly am I impressed with the importance of this disease that I wish to try more thoroughly to impress the idea by quoting from Dr. Anders, of Philadelphia, the following:

"Whether imminent danger of perforation exists or not, the physician who is called to a case of appendicitis, should at once request the services of a competent surgeon. Few surgeons subscribe to the doctrine that all cases demand operation, but since it may be necessary to perform celiotomy at any hour, thereafter, the latter should help to settle the important question. The physician who does not pursue the course above reommended falls short of his duty, both toward the patient and toward the surgeon on whose skill he relies to remove safely the source of danger. Surely in a disease that so often baffles both physician and surgeon, suddenly developing, as it sometimes does, a fatal virulence without previous unfavorable symptoms, they should stand guard together from the moment the case is diagnosticated, or appendicitis is suspected."

Dr. Osler remarks that "So impressed am I by the fact that we physicians lose lives by temporizing with certain cases of appendicitis, that I prefer in hospital work to have the suspected cases admitted directly to the surgical side. The general practitioner does well to remember whether his leanings be toward the conservative or the rad-

ical method of treatment—that the surgeon is often called too late, never too early."

I wish to say that I most unhesitatingly endorse this doctrine of Profs. Anders and Osler, after having so often seen the necessity of its having been practiced in our community. You all will appreciate the trouble and expense incurred by calling a surgeon to such a case in our sparsely settled country, and the long time that must elapse before a surgeon can see the patient, and I am constrained to give much latitude for the delay in calling the surgeon. It is only, however, to be contrasted with the fatal results caused by delay.

Now as to the symptoms, I will state that pain in the abdomen is the most constant. I have noticed that most writers state that there is pain on the right side of the abdomen. This, of course, is ultimately true in nearly all cases. But, according to my experience the first onset of pain in a large number of cases is experienced in the region of the stomach, and this is paroxismal and accompanied by vomiting. This usually subsides after a day or two and the pain and tenderness continues in the region of the appendix. The next most constant symptom is frequency of the pulse. The temperature may be subnormal, normal or elevated, but as a rule the temperature never runs high in appendicitis. One of the characteristic symptoms is abdominal rigidity. This is usually more pronounced on the right side, and the more rigidity there is present the longer has been the neglect in operating and the greater the danger of a fatal result. The bowels are usually confined, but sometimes during the first onset of pain the bowels may move a time or two and then become obstinately constipated. Such are the ordinary symptoms of appendicitis, but it is only by observing the different degrees of intensity of the above mentioned symptoms and the gradual extensions of the inflamatory condition to the peritoneum that the ulceration and necrotic changes may be diagnosticated. Of course, when these conditions exist, the general symptoms of sepsis are present, though sometimes quite obscure. Just here I wish to illustrate by giving the history of a few cases. I here show you the remains of the last appendix which I removed. The patient was a male, aged nine years, was taken March 15, 1902, with a pain in the stomach and bowels, and followed by vomiting. This was followed by obstinate constipation. I was called and saw the patient on March 19th. The diagnosis of intestinal obstruction had been made. At the time of my visit the temperature was 97 1-2, pulse 120, respirations 20. Every fifteen or twenty minutes he had paroxisms of pain in the upper part of the abdomen—only a moderate degree of distention. The bowels would hold about one quart of water and ex-

pel it without relief of the pain. There was no evidence of disease of the appendix obtained by physical examination. The abdomen was opened in the median line, and the free end of the appendix was found adherent to another part of the intestine, thereby producing obstruction. This was liberated and the appendix removed. In doing this a considerable part of the intestine escaped through the abdominal incision and it was necessary to incise and empty the gut before it could be replaced in the abdominal cavity. Artificial respiration had to be resorted to and under stimulants and hypodermoclysis the patient made a good recovery. In this case I was not able to say positively that the appendix was the seat of the disease.

I here show you another appendix (illustrating) removed from a male patient fourteen years of age. He was taken with pain in the right side of the abdomen Jan. 6, 1902. This was very intense and followed by acute obstruction of the bowels. I was called on Jan 10th. At the time of my visit his abdomen was greatly distended accompanied with general rigidity. His temperature was 101 1-2, pulse 130, and respirations 30 per minute. I thought that a general perotinitis existed and that death was imminent, but opened the abdomen over McBurney's point in order to give him his only chance for life. It was found that he had intusseption of about twelve inches of the intestine, including the appendix. The invaginated portion of intestine was liberated by first incising its outer layer, followed by closing the incision with fine silk (Lembert sutures), and the appendix excised. The patient soon succombed to shock and sepsis.

I don't think that anything can learn the physicians of a community so much about appendicitis as for a few cases to be developed near by them and one or more cases result in death. I must confess that I class myself along with them in being thus slow to wake up to the importance of prompt recognition and proper treatment of this disease. I wish to cite here the history, diagnosis, prognosis, treatment, and final result in a case where the deceptive character of the symptoms can be forcibly appreciated.

Patient, male, twenty-five years of age, was taken with pain in the abdomen August, 1901. He called a physician, who thought the disease was bilious colic, and his treatment was followed by relief. Complete relief was not obtained, and another physician was called a day or two later, and he remarked to me that he thought the patient had appendicitis. This physician went away and a third one was called, and after he had visited the patient he called me in consultation. This was five or six days after the initial pain. At the time of my visit his temperature was 99, pulse 66, respiration 20 per minute. The

skin was bathed with a profuse sweat, no pain only in the region of the appendix, where there was also some in duration. No distention of the abdomen. This induration was not marked nor was there much dullness. I made the diagnosis of gangrene of the appendix with fatal sepsis as my prognosis, but advised an operation. This was declined by the patient, but on the following day he demanded the operation. At the time of my second visit temperature was 99, pulse 62, respiration 20. Occasionally he would wipe the perspiration from his face; said that his bowels had moved well several times and that he was much better. I made the same diagnosis and prognosis, but for fear my prognosis might be incorrect, I operated. There was nothing very unusual to be found. Gangrene of the appendix and a fecal concretion very irregular in shape. Death followed on the next day. This case forcibly illustrates the deceptive condition in gangrene of the appendix, and is liable to be mistaken for a better condition until a fatal issue results. I don't believe that this man had a general peritonitis. He succumbed to the sepsis from the necrotic process before peritonitis could be developed.

I would not have you think that I mean that the physicians who saw this case were seriously to blame for not making an earlier diagnosis, although the final result in such cases brings us to our senses. Nor do I mean that I would certainly have made a correct diagnosis at the onset, or even during the first few days subsequently. You will see that I saw this case later and had more hind sight than I had of foresight. So did the patient. I could continue to cite cases to illustrate this subject, but will give only one or two others, and the same remarks apply to this as well as to the last mentioned cases, so far as failure in diagnosis is concerned.

Male, 45 years of age, was taken with pain in the abdomen, followed by vomiting and symptoms of obstruction. I was called three days later. His bowels had acted well. Temperature 100, pulse 90 per minute, some distention, but we thought he was better. No special dullness, nor tenderness anywhere over the abdominal region. Thought he was evidently septic. We waited twenty-four hours for developments. The sepsis was then more intense. We decided to operate, and just as the patient was brought to the table he became cyonosed and ceased to breathe. Of course, no operation was done before death. I immediately impressed the family with the great necessity of making the operation post mortem. This was immediately done. The appendix was found low in the pelvis, gangrenous and surrounded with pus. In fact, the peritoneal cavity was a pus cavity. The deceptive condition that accompanies gangrene of the appendix and the

peritonitis that followed in this case was so marked that the depression thus produced was mistaken for a better condition, until a fatal issue resulted.

Female, aged 15 years. I was called to see this patient about the 12th day of her illness, and was informed that she was accustomed to have painful menstruation, and that her menses were on her at the time of my visit. She was taken with pain in the abdomen, and this was accompanied within ten or twelve hours by vomiting. The physician in attendance gave the ordinary routine of treatment consisting of laxatives, enemas and morphine hypodermically. I was informed that large doses had to be given to control the pain, and that the bowels were confined for five or six days before the bowels could be moved. At the time of my visit her temperature was 101, pulse 120 and small, respirations 14 per minute. I wish to call special attention to this clinical picture. Think of it! Large doses of morphine, respirations 14 per minute, temperature 101, very low for most of serious conditions, and pulse 120 and perhaps 140 when the morphine was withdrawn. Couple these symptoms with antecedent pain in the abdomen, accompanied by vomiting, and one's attention is directed to some probable serious intestinal lesion. In fact, they stamp it as an intestinal disease of grave import. The physical examination revealed marked abdominal rigidity, most perceptible on the right side in the region of the appendix, as well as decided dullness over the whole appendical region. There was also great tenderness, notwithstanding the deep narcotism, as demonstrated by the respirations registering only 14 per minute in a female of 15 years of age. The diagnosis of general septic peritonitis was made (however, this was incorrect; the pus was circumscribed), with an unfavorable prognosis predicted, but an immediate operation was advised. This was done, and a large appendical abscess was evacuated. The appendix could be felt, identified with the posterior wall of the abscess, and its removal was impracticable. The general plan of gauze packing and drainage was depended upon to save the patient's life. In this case it was discovered after the patient was put to bed that among the debris was removed a common stick pin, covered by a fecal concretion. The condition of the patient was very precarious. The pulse numbered about 150 per minute. About one pint of hot sodium chloride solution was given under the skin as well as strychnine and morphine hypodermically. The patient has gradually recovered.

I have said this much on the importance of an early diagnosis. I now wish to call attention to the importance of the technique of some of pus cases. I will quote from the article by Dr. McBurney,

International Text Book of Surgery, by Warren & Gould, page 420, where he says:

"In some cases the appendix will be found so closely identified with the wall of the abscess that its removal would involve no little risk of infecting the tissue behind it; or when suppuration is abundant the operator may have been entirely unable to discover the appendix. In either case it must depend upon the judgment of the operator whether it is best to insist on the removal of the appendix, no matter how difficult and prolonged the dissection. It is true that occasionally a remnant of appendix which has been deliberately left, will at a later period be the cause of a fresh attack of appendicitis; or it may considerably prolong the healing of the wound. Nevertheless the most important consideration for the time being is the life of the patient, and it is much better to remove the appendix by a second operation done at a favorable time than seriously to risk the patient's survival at the first operation." I will cite a case to illustrate this:

Patient, female, aged 16 years. I saw here at the fourth attack of pain in the abdomen. This attack had been going on for three days, and there was evidently ulceration and an abscess around the appendix. She declined an operation. The abscess increased in size, and four days later I opened the abdomen in the median line. The interior of the abscess felt like the inside walls of a cocoanut. The pus was mostly evacuated at my incision and the uterus and ovaries were standing up in the middle o the abscess cavity. I carried a rubber drainage by Douglas' pouch, and thereby secured through and through drainage. A 'T' piece of rubber tubing was finally sewed to the upper end of the tube and drawn into Douglas' pouch and with the whole of it withdrawn through the vagina. The patient made a good recovery.

To further elucidate this part of the subject I quote again from McBurney, page 422, same article, where he says: "One should search carefully with the finger for loose fecal concretions and for the appendix itself. The latter may have already escaped in the form of a slough, or it may still remain and hang loosely in the pus sack. The greatest care should be taken not to break the wall of the abscess at an unprotected point, lest general infection of the peritoneum result. If the appendix can readily be found and removed, it should certainly be taken away and the stump treated in the usual manner. As a rule in abscess cases it is quite sufficient to cauterize and ligate the stump of the appendix without any attempt being made to suture it; as already explained, no very prolonged search for the appendix in abscess cases, and no dangerous dissection for its removal should be made. The appendix is frequently completely destroyed by

the suppurating process. Prolonged search for it in such cases would of course be purely harmful. If it has not been destroyed, it is frequently obliterated by the subsequent process of repair. Not infrequently have patients been sacrificed to excessive zeal in handling the cavity of these abscesses, and this is especially true of children. The only very important point is to give free exit to the pus; and after this has been done, the less the operation is prolonged the better."

I have thus quoted at length from the author mentioned on account of the fact that the laity cannot understand that when a surgeon operates in cases of appendicitis, his reasons for not removing the appendix in many of the abscess cases. In some of these pus cases the abscess lies near to, and involves the anterior abdominal wall, and the important part in operating in such cases is to make the abdominal incision so short that it will not open the abdomen beyond the area of adhesion.

INFECTIOUS AND CONTAGIOUS DISEASES IN SCHOOLS.

By B. F. Wilkinson, M.D.,

MONTEVALLO, ALA.

Hon. Board Trustees, Alabama Girls' Industrial School,

Gentlemen: At the beginning of the scholastic year just closed. it occurred to me that some plan should be devised whereby the physician might become better acquainted with the personal and family history of the girls; believing also that some plan should be improvised for preventing the introduction into the school of infectious and contagious diseases, and feeling the necessity for an accurate record of the girls while in school, I improvised a system of examination which has been eminently satisfactory—a blank is inclosed. You will see at once in the blank inclosed that there had elapsed scarcely sufficient time to say that the young lady had escaped scarlet fever. You will readily see the danger to the school. Three other girls were discovered to have been exposed to scarlet fever within three weeks of their admission. It is not only possible, but highly probable, that the case of scarlet fever we had in the fall was due to the removal from the trunk, by some one of these girls, the very clothing worn by them at the time of their exposure. Note the family and personal history in the case mentioned. Poor heredity, treated in a sanatorium at 16, a tendency to consumption; what shall be done with a case like this? Refuse her the advantage of the Alabama Girls' Industrial School? No; it seems to me that in a case of this kind, the physical system should be developed to its utmost capacity, the number of recitations limited. Educational and physical development can be conducted sim-

ultaneously, and should be done. This case is only one of a number nearly as bad. According to my plan, the pupil will be weighed upon entrance, her height will be ascertained, the capacity of her lungs will be tested with a spirometer; the heart's action with the sphysmograph, the hand grasp with the manometer, etc. At the close of school, this will be repeated. Thus, during the past year, there has been an average gain in bodily weight of 5.79 lb. per pupil. We have had an unusual amount of sickness during the year just closed. This was due in a measure to defective plumbing, but possibly to a greater degree to the prevalence of influenza and pneumonia throughout the State. We had tonsilitis, 53 cases; menstrual disorders, 70; la grippe, followed by broncho-pneumonia, 4 cases (these girls were sick respectively, 49, 69, 70 and 77 days); abscess of frontal sinus, 1; lobar-pneumonia, 2 (one complicated by diphtheria and sick 31 days); scarlet fever, 1; catarrhal appendicitis, 2; small pox, 3. None of the small pox cases were sick enough to go to bed, nor were any of them pitted. It is the opinion, however, of our State Health Officer, that the disease was small pox. Six girls complained of poorer health here than at home. We had six cases of rheumatism and a number of cases of contagious sore eyes. Dysentery and digestive troubles were less frequent than formerly. Malaria, as usual, played an important role. 38 girls suffering at intervals from this cause alone. Most of these cases came from the Black Belt. It is my purpose to give you a map at some future time showing the geographical location of the places from which we are to expect chronic malarial sufferers. Seventeen girls went home on account of poor health and nine more on account of severe illness. There were eight girls in school with decided tendencies toward consumption. Five girls were received in the beginning of the year who were so much below the average that grave fears were entertained as to their abilities to prosecute their work. Of these five, four remained, and each showed an actual gain in height and weight. The total expense of the school and the girls for necessary drugs was $373.83. Of this $373.83, $168.85 was for special prescriptions, the regular preparations being carried by the school as heretofore. Of these special prescriptions, $45.20 remains unpaid. The school is practically without apparatus. There are needed bed pans, commodes, ice bags, fountain syringes, hot water bottles, clinical charts, catheters, rectal tubes, a wheel table for transferring the sick, a stretcher, pus basins, urinals, feeding bottles, a bandage roller, and in fact a host of things indispensable and usually provided in all institutions where provision is made to care for the sick. I cannot stress too strongly the need of a hospital. This was exemplified nearly every

day last winter. The incessant noise in the corridors oftentimes absolutely forbids much needed rest and sleep. There is not sufficient privacy. The sick are liable to have their rooms invaded at any time and their comfort disturbed. As urgently as we need a hospital, there is as great need for an isolation hospital. During the past winter, one of the girls suffering from small pox visited freely other girls upon the same corridor. It was only by the utmost exertion and every possible precaution that epidemics of scarlet fever, diphtheria and small pox were prevented. Another time we might be unsuccessful. A three-room cottage, one hundred yards from the dormitory and in the rear of the building would be ample for present needs. The building now occupied by teachers can be used another year for a hospital, but considerable repairs are necessary. I would also recommend the construction of a steam house adjoining the laundry for the disinfection of furniture and bedding. This can be done best by dry heat at a temperature of 150 degrees to 180 degrees C. In this way nothing will be decolorized or injured. At the same time all germs and insects will be effectually destroyed. This building can be constructed at a cost of less than $100, and during the summer months all the school furniture can be disinfected. I wish to express my appreciation for the unselfish devotion and hard work of my assistant, Miss Henderson. She has been faithful and prompt in all her services. I very much fear you will not be able to fill her place at the present salary. In conclusion, I feel profoundly thankful that the watchful care of the Great Protector has been over us, and that not one has been called during the past year from Time to Eternity.

PRELIMINARY NOTE ON A NEW QUININE DERIVATIVE.

By H. P. Coile, M.D.,

KNOXVILLE, TENN.

During a professional experience of some twenty-seven years the writer has been induced to prescribe several diffrent products of cinchona offered the profession as tasteless quinine, all of which failed to prove satisfactory substitutes for the sulphate of quinine, and were soon abandoned. About a year ago I had called to my attention the new tasteless product, saloquinine, the salicylic acid ester of quinine. In view of my unsatisfactory experience with former preparations I was somewhat reluctant to prescribe this new remedy. Owing to its chemical composition, however, I was led to believe that possibly

it might be beneficial in certain cases of lagrippe and rheumatism, and I have used it in a few cases with apparently good results. My observations, however, are as yet limited, and in a measure, imperfect. The fact that the powder is tasteless and has a gritty feel may give one the impression that it does not contain quinine. The absence of taste is due, however, to its insolubility in the salivary secretion, and not to the absence of the bitter cinchona principles. I have dissolved a powder of saloquinine in water acidulated with hydrochloric acid and brought out the bitter taste in a marked degree.

Saloquinine, when swallowed, comes in immediate contact with the free hydrochloric acid of the stomach and is quickly dissolved. The medicine probably possesses the tonic and antimalarial qualities of quinine as well as the anti-rheumatic action of salicylic acid. In a few cases of lumbago in which I have prescribed it, it has relieved the patient after taking a few powders dry on the tongue, followed simply by plain water. It also appears to be a valuable remedy in la grippe.

My opportunities for testing its value in malaria have been limited, as the disease in my locality is almost unknown. Recently, however, I gave saloquinine to a child 18 months of age with a high range of temperature presumably due to malaria (no blood examination made). The symptoms yield promptly to the treatment.

It is in children we find the greatest difficulty in administering the bitter preparations of quinine. They are too young to swallow it in pill or capsule, and the various excipients used for this purpose are only partially satisfactory. When used in sufficient quantity to disguise the quinine they soon disturb the stomach and usually produce vomiting. Saloquinine, suspended in water, can be administered to children with ease, and it is usually well borne.

So far in my experience I have not observed any unpleasant effects from its use except in one case of a young girl with high temperature, in which vomiting occurred after each dose, and the remedy had to be suspended. It is only fair to add that she was a very delicate child, and almost any medicine produced vomiting in her case.

My experience would seem to indicate that saloquinine deserves a fair and impartial trial at the hands of the profession. The absence of taste, provided its therapeutic value is further established, would give it the first place among all cinchona preparations in the treatment of children where it is indicated. In la grippe, myalgia, and subacute rheumatism it will be found a useful remedy.

ABDOMINAL AORTA LIGATION FOR ANEURISM.

The fourteenth case in which the abdominal aorta has been ligated and the operation recorded is that reported by Morris (Annals of Surgery, February, 1902), who believes that the operation may be successfully accomplished in the near future.

Examination of the abdomen of a colored woman of twenty-four disclosed an epigastric tumor pulsating so forcibly that the beats were visible at a considerable distance from the patient, and the objective signs of aneurism of the aorta were typical of that condition.

For purposes of ligation, Morris chose a soft-rubber catheter about 12 millimeters in circumference to avoid injury to the tunica intima. The aorta having been isolated from surrounding structures for a short distance, the catheter was carried around it with the aid of an aneurism needle threaded with a loop of silk. The loop of catheter surrounding the aorta was then drawn tightly until circulation in the femoral arteries ceased, and a long clamp forceps held the catheter in place. This avoided tying. The ends of the catheter and of the forceps were allowed to protrude from the abdominal wound, which was sutured, with the exception of room for the ligating apparatus. The ligature was applied at a point about two inches below the aneurism and one and a half inches above the bifurcation of the aorta.

The operation may be done in about fifteen minutes by a person fairly skilful.

Nineteen hours after operation the patient could feel the prick of a pin over the vastus muscles, but the legs showed general loss of sensation. In twenty-two hours from the operation, the heaving, expansile pulsation of the aneurism suddenly began to diminish. In about three hours it had apparently disappeared

The ligature was removed twenty-seven hours after being first applied. Sensation was restored and sphincter control regained. There was every hope of recovery, but on the following night she began to develop evidences of intense septicemia. She died fifty-three hours after the operation.—The Therapeutic Gazette.

TREATMENT OF PRE-SENILITY.—Ferguson details a case of impotence following a prolonged attack of gonorrhea. It was his third attack, and his virile power was almost lost, and he suffered from frequent micturition. He had in addition orchitis on both sides. The case was particularly obstinate and many remedies had been used to no purpose. He had already exhausted the resources of several quacks. Sanmetto was prescribed in teaspoonful doses three times a day, and improvement and recovery followed.—Medical News, New York and Philadelphia.

Selected Articles.

ERGOAPIOL (SMITH) IN DISEASES OF THE FEMALE.

By Charles H. Shepard, M.D.,

DURHAM, N. C.,

Physician to Lincoln Hospital.

A deep and general interest is attached to all knowledge pertaining to the treatment of common diseases of the uterus, to which women are subject, and a vast literature is the outcome of this profound and focussed interest. We live today in an age of transition—a period of change. A great many of the former theories of medicine are fast passing away. New medicines are made, achieve a short-lived success. and then pass on to obscurity. This is true most especially in medicines for gynecological diseases. Of the newer remedies it is hard indeed to get one that may be depended upon for long. They soon lose their reputation and potency and are relegated to the past.

We know that all diseases of the womb have not the same etiology nor the same pathology, therefore they should not all have the same treatment. Far too often the general practitioner groups all these diseases together as one and gives the routine treatment. It is not enough to give anodyne medicines for dysmenorrhea any more than it is sufficient to treat alike all forms of dysmenorrhea.

The operation of curettment has a most important place in these conditions, but like other remedial agencies it has its limitation. When we curette the uterus we rid it of a pathologically obnoxious lining membrane, and afford a normal membrane the opportunity to be formed.

The healthy woman with normal genitalia menstruates regularly and painlessly once a month from puberty to the "turn" of life, except that this regularity is interrupted by pregnancy and afterward by lactation. Any departure from this rule constitutes an abnormality. Amenorrhea is less frequently met with than dysmenorrhea and irregular menstruation. The present age of transition has brought forth what is popularly known as the "new woman," and she has brought with her new ideas and practices which in very many cases retard growth and the natural process necessary for perfect health. For leaving the old landmarks, she has to suffer.

The most generally useful medicine in the conditions of amenorrhea, dysmenorrhea, irregular, scanty and fetid menstruation, in my judgment, is a preparation of the Martin H. Smith Company, of New York, known as Ergoapiol (Smith). In the female ward of the Lincoln Hospital, Durham, N. C., I have used this medicine very extensively, and it has not only never failed to benefit and cure, but I know of no remedy with which I could replace it were I deprived of it. Its efficacy may be tested by any physician who properly tries it. I mention a few cases with short description of each, in which it has given the most signal benefit in my hands:

Ergoapiol (Smith) is put up as a small capsule, and is made up of a special form of apiol, which is of the very highest quality. Combined with this are some other most valuable hemagogues, and they all go to make a fine preparation. It seems to be a scientific pharmaceutical preparation, non-toxic, tonic, as well as emmenagogue. What I have to say of this preparation is based entirely upon clinical experience, and I feel safe in saying that it will bear a clinical test whenever properly administered.

REPORT OF CASES.

No. 1. Mrs. F. was admitted to hospital September 15, 1901; married; no children, though she had been married four years. Had not menstruated for seven years. Womb had been curetted several times. Suffered from leucorrhea; pains in right and left iliac regions continuous. Examination showed a very small os, but generative organs were otherwise found to be normal. Another curettement failed to bring on the menses. I then prescribed Ergoapiol (Smith) to be taken one globule three times a day, and afterwards increase to one globule four times a day. After seven days of this treatment she complained of a general feeling of stiffness in her limbs, gaping and a feeling of malaise. The following morning she found to her delightful surprise that sre was menstruating for the first time in seven years. At that time the flow was somewhat scanty, but the treatment was continued through three periods. Each succeeding period was more nearly normal than the one that preceded it. Now her functions are regular and I know no reason why she may not become pregnant.

Case No. 2. Mrs. S. complained of a continuous dull, dragging pain, situated in the region of the iliac fossa of the right side. Menstruation irregular, scanty, fetid. Married six years; had never been pregnant. Excessive leuchorrhea, though otherwise she was perfectly normal. Her weight was 140 pounds. Her condition, and the suffering, both physical and mental, which it occasioned her, was rapidly undermining her health. She was becoming emaciated, appetite of no con-

sequence, general weakness. She considered her condition "hopeless." Cardiac weakness, of which she was a victim, contra-indicated curettement, which usually cures "whites" and allows the formation of a healthy lining membrane. Ergoapiol (Smith) was prescribed for her, one capsule three times a day. In conjunction with this, I gave tonic medicines. After six weeks' use of this remedy, the woman said she was "feeling so good" that she did not need any further treatment. She had increased in weight, and her appetite had become all she could wish. The menstrual flow was increased, and now, five periods having elapsed from the time treatment was instituted, her monthly flow has failed to appear. She does not expect its return for some time—supposing herself pregnant.

No. 3. Miss S. suffered severe pain each month beginning a day before the flow came on. The flow was a thick, clotted mass, consisting of membrane and the menstrual blood matted together. She had suffered from puberty, and the suffering became more intense as the years passed on. She was 19 years of age, stout, of healthy parentage. Admitted to Lincoln Hospital January 15, 1902. She declined an operation. I afterwards prescribed Ergoapiol (Smith) and have continued it for one month. Her next menstruation was free and easy, painless and regular. I doubt not that keeping up this treatment up to another period, she will be entirely rid of the hitherto troublesome condition.

No. 4. Miss W. Tubercular history. Menstruation very irregular, sometimes three, sometimes five weeks between periods; very painful, scanty. I prescribed Ergoapiol (Smith) one capsule four times a day beginning one week before the menstrual period and continued a week after the period. As a result of this treatment the patient feels a great deal better in her general health; her monthly flow has been rendered painless and increased in quantity. Ergoapiol has a tonic action upon the muscular fibres of the womb. Its effect is not transitory, but lasting. This superior preparation is decidedly tonic.

No. 5. Mrs. D. A victim of endometritis. Pain continues between periods and is aggravated at periods. Leuchorrea was very pronounced. Pains in the back: "hot flushes;" vertigo; headache. Patient would not allow an operation; highly sensitive. Several preparations were tried, but none gave relief until Ergoapiol (Smith) was used. It has entirely relieved the patient, and she is now loudly singing its praises. In this case treatment was kept up for ten weeks.

Ergoapiol has never failed in my hands. It is not possible that it can cure obstructive dysmenorrhea, but with that exception it is indiacted in all the other diseases of the womb where a tonic and sedative action is the requirement.

Case No. 6. Mrs. D., widow; aged 33; had three children; youngest 10 years of age. She had suffered all her menstrual life severe pains in the pelvis at each period; had to keep in bed a week or more each month. Paroxysms of pain were followed by a flow of the "whites;" no anemia; womb found to be flabby and relaxed; pains extended down thighs posteriorly; had been treated for many years by various physicians of note, but had received only temporary benefit.

Ergoapiol (Smith) was given her, one capsule three times a day, and increased at the time of the flow to four times a day. After three months of this treatment her menstrual function became regular, and being entirely well now, she feels that life, after all, is worth living.

I could prolong this list indefinitely with records of cases that have been entirely relieved of these conditions, and I shall be pleased to furnish any information desired as to Ergoapiol (Smith) and its use.

Durham, N. C.

SUMMER DIARRHOEAS OF CHILDREN AND THEIR TREATMENT.

By M. A. Auerbach, PhG., M.D,

NEW YORK,

Medical Inspector, Department of Health.

The importance of these demand a separate consideration. Three forms more or less distinct, may be recognized, viz.: acute dyspeptic diarrhoea, cholera infantum and acute entero-colitis.

Acute Dyspeptic Diarrhoea.—This disease is chiefly due to errors in diet, which do not necessarily consist in the substitution of unnatural foods for the mother's milk. The mother's milk may be altered in quality by emotional causes, by improper food and improper hygiene. Or it may be caused by over frequent nursing. More often, however, it is caused by the ingestion of unnatural foods.

There are also pre-disposing influences which facilitate the action of the exciting causes. These are especially, dentition, and the extreme heat of summer.

The prognosis of the aforesaid disease among the better classes is commonly favorable, but among the weak, puny and half starved children of our lower East Side large numbers perish, especially during the summer months.

The old time treatment in these cases was a primary purge, calcined magnesia, or castor oil. After the purge bismuth sub-nitrate or prepared chalk was given. Since the introduction of Glyco-Thymoline (Kress) the above mentioned methods have been cast aside. A very

good and effective prescription which has given me most splendid results in these kind of cases, in conjunction with a carefully restricted diet, is

Bismuth Sub-nitrate, Dr. I.
Tr. Opii Deoderatum, M. X.
Glyco-Thymoline, Oz. II.
Aqua Rosarum, Ad. Q. S ,Oz. IV.
Misce et.
Sig. Dr. 1 every 3 hrs.
(For a child one year of age.)

Cholera Infantum.—A variety of acute catarrhal enteritis of intense severity, corresponding in symptoms and course to cholera morbus in the adult, but more serious in termination.

Prognosis in these cases is at best not very favorable, although recovery is not impossible.

Treatment of these cases is of quite a different nature from those above mentioned. In the first place the fever must be combated, and I know of no better method than a bath containing some Glyco-Thymoline, at about 80 degrees F., reduced by adding small pieces of ice to 70 or 65 degrees. Next, pain. To reduce pain, 100th of a grain of morphine sulphate can be administered to a child of one year. Stimulation with strychnia hypodermically, iced champagne to prevent vomiting, brandy, whiskey, and other stimulants.

One of the best methods for irrigating the large intestine is by introducing a small, soft catheter through the rectum and injecting into the bowel about a pint to a pint and a half of warm water containing about 25 per cent. of Glyco-Thymoline. This I find removes and prevents the re-accumulation of the fermentative as well as the putrefactive products of the bowel. Should, however, the hyperprexia continue, the douche may be given at a lower temperature. During convalescence great care must be taken in the feeding of the patient.

Acute Entero-Cholitis is an affection of inflammatory nature more severe than dyspeptic enteritis, chiefly of the ilium and colon, affecting especially the lymph follicles. This, like the preceding, is a disease of the hot months of summer, and the period of teething especially. It is produced by the same causes as dyspeptic diarrhoea. It is most frequent between the ages of 6 and 18 months. It likewise may be a termination of dyspeptic diarrhoea, or of cholera infantum.

Treatment.—The general surroundings and hygiene necessarily play an important part. The medical treatment, however, is somewhat different. Anodynes are more imperatively demanded because there is greater suffering, and depletion may be needed in the beginning, by

salines, though good judgment is required, because the child's strength must be watched. The colon should be flushed with a solution of Glyco-Thymoline having a strength of 25 per cent. This I find answers admirably in these cases. The solution may be made with iced water. The coming teeth should likewise be watched and the gums be scarified whenever required.

I will supplement my remarks by adding a few of the many cases treated with Glyco-Thymoline, and leave results speak for themselves.

Case No. 1. M. K., aged eight months, male, was taken sick with severe vomiting and colicky pains at night. The vomits contained lumps of coagulated milk. The stools were very offensive and occurred at intervals of 20 minutes. I left a prescription for Glyco-Thymoline 2 oz., Bismuth sub-nitrate one drachm, rose water enough to make four ounces. I called the next morning and found but little improvement in my patient, and at once flushed out the bowel with a 25 per cent. aqueous solution of Glyco-Thymoline and continued the prescription given the night previous. This treatment was continued for three days, the patient steadily improving during that time. I recommended that the child be taken away from the city, which was done. I heard later from the parents that the child had not had a relapse, but made a speedy recovery.

Case No. 2. Mary C., aged seven and one-half months, was brought to my office, her little knees drawn up, a look of anguish on her face which was pale and drawn ,with eyes protruding. She had a number of watery discharges from the bowels, incessant vomiting, a temperature of 103 1-2, a rapid and feeble heart. A further examination of this poor little tot was unnecessary. Anodynes were at once administered to soothe the pain. I washed out the bowels with a 4 per cent solution of Glyco-Thymoline and administered the same in a 50 per cent. solution with peppermint water internally in doses of one teaspoonful repeated every two hours. The results in this case far exceeded my expectations. The child made a slow but successful recovery.

Case No. 3. L. P., male child, aged 16 months; was called to check the diarrhoea, which was of a serious character, having a tinge of blood. The vomiting was not of a severe nature, the only alarming symptoms the child showed were the intestinal ones. Three separate washings of the child's colon were made at intervals of six hours. The child's food was restricted to barley water; this case like the one preceding, made a perfect and speedy recovery.

Case No. 4. R. A., a little tot of the East Side, aged 13 months, brought up in one of the dark and dingy rooms of a tenement house; this poor little one was suffering for five days before my attention

was called to the case. I found it in an emaciated condition, unable to move a limb; the bowel movements were frequent and watery; the little one was on the point of collapse; strychnia was administered hypodermically to stimulate the heart, after which diluted brandy was given every half hour. The colon was irrigated with 24 oz. of a 50 per cent. aqueous solution of Glyco-Thymoline; I had the child under my observation for two and one-half weeks, and with proper food and fresh air the child made a good recovery.

Case No. 5. M. M., a boy baby seven months of age, teething and causing all sorts of trouble for his parents, who were well-to-do. Was summoned to the house early one morning; found the little one vomiting quantities of curdled milk, and movements having a decidedly fetid odor. I tried most everything in this case and received but small relief by the use of Glyco-Thymoline. Upon careful investigation I found that the teeth were causing the trouble; the gums were then lanced, and the child's diet restricted; that is, the breast feedings were given at three hour intervals, and only lasting five minutes at a time. Glyco-Thymoline was kept up with perseverance, and with good nursing our little one soon got well.

COMMONWEALTH OF MASSACHUSETTS.

Middlesex, ss. Superior Court in Equity.

The M. J. Breitenbach Company, Complainant,

vs.

Henry Thayer & Company, Defendant.

DECREE.

The above entitled cause having come on to be heard, and a trial having been had, and the evidence offered by each party having been received and considered, and it appearing to the Court that the use of the wrapper and package employed by the defendant for its preparation of iron and manganese, as described in the Bill of Complaint, is calculated to deceive the public and enable the defendant s preparation to be passed off as the preparation of the Plaintiff, known as Gude's Pepto-Mangan, now after hearing Messrs. Paul & Barnard and Philip Carpenter, of counsel for the Complainant, and J. B. Manadier, for the Defendant, it is hereby

ORDERED, ADJUDGED AND DECREED, that the Defendant, Henry Thayer & Company, its directors, officers, agents and servants, be and they hereby are enjoined from making or using in any way, the terra cotta colored wrapper with white letters thereon, and the package in connection therewith, heretofore used by the Defendant, for its preparation of iron and manganese, a specimen of which wrapper is annexed to the Bill of Complaint, and marked "B,' or any other wrapper or package therewith which imitates the wrapper used by the complainant, the J. M. Breitenbach Company, for its Gude's Pepto-Mangan, a specimen of which wrapper is annexed to the Bill of Complaint marked "A, and from selling or offering for sale any preparation of iron and manganese in any package or wrapper of a terra cotta color with white letters of the same style, shape and general arrangement as those of the aforesaid wrapper used by the Plaintiff, the M. J. Breitenbach Company, and from using the words "Peptonate-Manganese" on or in connection with such terra cotta colored wrappers with white letters of the same style, shape and general arrangement as those of exhibit "A."

And the Defendant is forthwith directed to deliver to the Plaintiff or its attorneys, to be destroyed, all the terra cotta colored wrappers and packages aforesaid like the said exhibit "B,' which the Defendant now has on hand or in stock or under its control in any way.

AND IT IS FURTHER ORDERED, ADJUDGED AND DECREED, that the Defendant, Henry Thayer & Company, account to the Plaintiff, the M. J. Breitenbach Company, for all profits which the said Defendant has made from the sales of said preparation in its said wrapper and package, and for all profits which the Plaintiff would have made in the sales of its Gude's Pepto-Mangan but for the use made by the Defendant of its said wrapper and package, and also for the damages to the reputation and standing of the Plaintiff s said preparation, known as Gude's Pepto-Mangan, by reason of the said use by the Defendant of its said packages and wrappers, and of its preparation therein contained, and for the damages otherwise sustained by the Plaintiff by reason of the matters charged in the Complaint.

AND IT IS ORDERED, ADJUDGED AND DECREED that the Plaintiff recover of the Defendant the costs of this action.

By the Court,

A true copy. Attest: Theo. C. Hurd, Clerk.

(Signed) Theo. C. Hurd, Clerk.

Editorial.

JNO. C. LeGRANDE, M. D.,.....Editor and Prop.

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Ten Days on Lookout Mountain.

For many years the pleasure seeker and the lover of nature and history has found his dreams realized on Lookout Mountain. There on those heights of beauty and grandeur are monuments that will live while time shall last.

Standing on one majestic rock, looking out over the broad expanse of river and forests, which seem from this great height to be but a small rivulet and miniature trees, then turning back to read tablets of history on famous battle grounds, it is not strange that one exclaimed, "What God hath wrought, what man hath braved!"

To this famous spot come tourists from all parts of the world—from over the waters, as well as from every corner of our own land. Often on the old battle field stand veterans of both the North and the South—the blue and gray—clasping hands in brotherhood now, where once as foes they made eternal history. No spot, perhaps,

attracts a greater number or variety of people than does Lookout Mountain.

Lookout Inn is a magnificent structure, of rare architectural beauty, elegant parlors, halls, and bedrooms. Every comfort and modern convenience is found here, and the service cannot be excelled. Managed by people of vast and varied experience, genial temperament and business ability, Lookout Inn affords not only physical comfort, but every social pleasure as well. Superior in every appointment, with ready and willing service at all times, friction, that most undesirable of all elements in resort hotels, is not found in Lookout Inn. Delightful breezes, a temperature many degrees lower than that of the surrounding country, scenery unexcelled in magnificence, monuments of history, genial associations, every physical comfort—all these are to be found on Lookout Mountain. He who has not spent weeks of his vacation on this famous spot should go at once. He who has done so will go again.

The Code of Ethics.

The Jefferson County Medical Society is at this writing agitating a question equal to that of a "Filtration Plant." It is always unpleasant for medical men to deal with ethical questions, yet it at times becomes absolutely necessary; and while the medical profession is conservative and liberal, and we may say, lenient and forgiving, but when confronted with a plain violation of the rules of the Code of Ethics, there has always been and will continue to be a stubborn effort made to maintain a high standard on ethical questions. There should be no fear of public sentiment when questions of ethics are to be considered.

The fact is the public fails to appreciate and can never understand the deep underlined principle which actuates the better element in the medical profession in standing by and maintaining the Code of Ethics and there is but one thing which every honest doctor can do, and that is to be honest with himself, sincere in his treatment of his colleagues, and take results. All questions of this character will result in a higher appreciation of the medical profession when those in authority or those who have the responsibility of executing the law are controlled not by prejudice, but by a conservative appreciation of right to all men, and especially to the members of the medical profession. It is a comfort to any physician who has the consciousness of observing to the best of his ability the spirit as well as the written letter of the Code.

Medicine and Matrimony.

The British Medical Journal discusses a very interesting and important subject, which is commented on by the Atlanta Medical Record of Medicine, setting forth Dr. J. M. Emmert's conclusions on this important subject, which are as follows:

"In his address on State Medicine, delivered at the annual meeting of the American Medical Association held a few weeks ago at Saratoga Springs, Dr. J. M. Emmert put forward a comprehensive program of reform for the physical betterment of the people of the United States. In that program he includes the medical regulation of marriage. He contends that the State should prohibit the marriage of blood relations up to the second degree, and that all of either sex affected with either congenital or acquired specific or infectious disease, such as venereal or pulmonary affections, confirmed drunkards, criminals, anarchists, and degenerates, should be prevented from entering the estate of matrimony. He insists that every applicant for a marriage license should present a certificate from a medical examiner appointed for the purpose, stating that he is free from any disease that would interfere with procreation or be injurious to offspring.

This is not the first time that the legislative restriction of marriage in the interest of the public health has been before the American Medical Association. It was freely discussed at the annual meeting of that body in 1900, and there was a remarkable unanimity of opinion among those who took part in the discussion in favor of some form of State regulation of marriage. Before that time the Senate of the State of North Dakota had taken the lead in the direction indicated by passing in 1899 the Creed Bill, which provides that licenses to marry are to be given only to such applicants as present a certificate from a board of examining physicians stating that they are free from venereal disease, epilepsy, hereditary insanity and tuberculosis, and that they are not habitual drunkards. The Tri-State Medical Society of Tennessee, Alabama and Georgia not long ago urged the necessity of legislation for the regulation of marriage in these states. America is a pioneer of sociological experiments, and since then bills similar in scope have been introduced into the Legislatures of Minnesota, Wisconsin, Michigan, Colorado, and several other states. In Europe a bill making it necessary for candidates for matrimony to procure a medical certificate of physical and mental capacity was introduced some time ago into the Bohemian Reichsrath on the initiative of the Bohemian Medical Society. A year or two ago Professor Hegar suggested that the German Parliament should pass a similar enactment, and Professor Pinard lately invited the Acasemie de Medicine

to express an opinion in the same sense. The prohibition of marriage to sufferers from tuberculosis was urged on the attention of governments and statesmen by the Tuberculosis Congress held at Naples in 1899.

All this indicates the beginning of a movement on the part of the medical profession in different countries to induce governments to grapple with what is undoubtedly, from the sociological point of view, a most important question. So far little progress has been made. Statesmen are for the most part profoundly indifferent, and it is hardly to be expected that the public should at this stage take the matter seriously. That it is desirable in the interest of society that the physically and mentally "unfit" should not beget offspring to whom they may transmit their deficiencies is, as an academic proposition, undeniable. But to attempt to secure this desirable end by 'force majeure' would be not only tyrannous, but, we believe, futile. Even if to satisfy the sentiment of scientific reformers, laws or the prevention of the marriage of the unfit were passed, it is difficult to see how they could be enforced. You may expel nature with the fork of the law—'tamen usque recurret.' Love, which is stronger than death, will have an easy victory over the law.

The only practical result of the prohibition of marriage to the diseased and the degenerate would be the increase of concubinage; the birth rate of the unfit would not be appreciably decreased, and they would have the added brand of illegitimacy to make the struggle of life harder for them. What right has society, for no better end than the physical perfection of the breed, to inflict on persons guilty of nothing but a diseased inheritance, a disability which makes a life overshadowed by ill health still gloomier?

Doubtless we have the right to protect ourselves and those under our charge against the physical and often moral wreck that follows marriage with a person actually diseased or of unhealthy stock. We should gladly welcome any attempt to deter persons so tainted from inflicting upon unsuspecting victims the terrible injury of a union with them. But we deprecate grandmotherly legislation for the preservation of the human species as not only essentially selfish in itself, but as distinctly antisocial in its tendency and probable results.

After all, even with all the assistance of the survival of the unfit given by modern sanitary improvement and humanitarian effort, they cannot escape the doom of natural extinction for more than a generation or two. If we are to admit the doctrine that society is justified by the law of self-preservation in purging itself of the unfit, the simpler plan would be to revert to the barbarism of ancient peoples, who

solved the problem by destroying them in infancy. This method is at once more effectual and more humane than condemning them to a life of isolation from their kind and exclusion from the chief solace and support against the ills of life to which every human being born into the world has a natural right. In the interest of society itself it might not be altogether wise to drive a large body of unfortunates, who carry in their very constitution the capacity of infinite mischief, into active revolt.

The true mission of the medical profession in this matter is not to promote legislation which is almost certain to defeat its own purpose, but to instruct the public in the dangers, both to the individual and to the community, of unwholesome marriages. The education of the public mind in the practical aspects of a question in which all members not only of the nation and the race, but of the human family, are directly interested would, although the process must needs be slow, make laws for the medical regulation of marriage unnecessary.

MANAGEMENT OF THE ANESTHETIC IN OPERATIONS ON THE RESPIRATORY TRACT.

In operations about the nose and mouth the management of the anesthetic has always been unsatisfactory, says Mosher (Boston Medical and Surgical Journal, Jan. 23, 1902), the reason being that in using a cone or an inhaler, the etherizing and the operation cannot be carried on together.

Mosher believes that the apparatus of Fillebrown and Rogers obviates this difficulty, nor is this apparatus untried, it having been used in cleft palate operations for the last three or four years.

The etherizing is accomplished by playing a stream of ether vapor over the patient's mouth. A water-bath keeps the ether from freezing in the bottle in which it is vaporized, and the ether is forced through the tube and into the patient's mouth by a bellows. A valve in the stopper of the ether bottle gives the etherizer a simple method of administering any strength of ether and air desired. A shielded alcohol lamp keeps the bath warm.

It has been abundantly proved that chloroform is dangerous in adenoid cases or in cases where much mucus is developed. Less vomiting follows if gas is used to start with, and the patient does not seem to get so saturated with ether afterwards, and comes out sooner.

In the matter of position, the point to be aimed at is to get the light on the part which is being worked upon. The upright position accomplishes this best. There is less bleeding. The head can be bent

back and turned to the side so as to show either tonsil, as required. If the head is regularly tipped forward the blood will run out of the nose and the mouth instead of down into the throat.

As to holding the patient, the arm of the nurse should lie in the bend of the child's hips. If the patient is anything more than a baby, a nurse can be dispensed with for holding; the assistant puts his left leg in the chair back of the patient, grasps the patient's hair and holds the head against his knee.

In all the more extensive operations it is well to have the etherizer free to confine himself to the ether alone.

Moshr remarks that those who give atropine as a routine measure before operating to prevent the formation of mucus would seem justified in this, from the fact that atropine has prevented death in the case of animals subjected to rough manipulation in the pharynx or upper larynx.—The Therapeutic Gazette.

BEST NURSES WANTED.

Private nursing should be done only by the best nurses. A nurse who has never before known what it is to have no one in authority over her, to whom she may flee in an emergency, finds herself alone, maybe, in the country, miles from a doctor. The patient's life may depend upon her competence to act promptly. She may find herself with a cantankerous old patient, who can be managed by no one who has not an immense amount of power of inspiring confidence. She has to know when it is necessary to summon medical aid, how to calm the nerves of anxious friends, who would wear the doctor out with ceaseless calls upon his time and patience unless the nurse had enough knowledge and assurance to allay their fears. She must know how to walk into a disordered household and restore order out of chaos. Possibly the head of the household has had a stroke. The family is distracted, the servants are weeping. A quiet, calm nurse, with a full knowledge of the gravity of the case, steps in, and order reigns again. She must, as far as her own self is concerned, be a cipher in the house where she is nursing, and it takes a well-disciplined and a good woman to accomplish that. She must realize that she enters a house to nurse back to health one who is sick. She must sink herself into oblivion, and be prepared to be just what that particular household requires her to be. There are many other qualifications necessary, but these seem to be the most salient, and when we look them over does it not seem ridiculous to expect all this of a half-trained woman or of one who cannot succeed in other walks of her profession?—London Hospital.

Miscellaneous Notes.

NEW ORLEANS POLYCLINIC

Sixteenth annual session opens November 3, 1902, and closes May 30, 1903. Physicians will find the Polyclinic an excellent means for posting themselves upon modern progress in all branches of medicine and surgery. The specialties are fully taught, including laboratory work. For further information, address New Orleans Polyclinic, Post-office box 797, New Orleans, La.

Dr. B. L. Wyman is in New York for a few days.

Dr. Lewis C. Morris of this city has returned from a six weeks stay at Johns Hopkins.

Dr. Edgar A. Jones, of Birmingham, Ala., is spending a few weeks in Baltimore, Philadelphia and New York.

Out of 120 candidates for appointment as assistant surgeon in the army, only eighteen passed the examinations which were recently held.

Dr. W. Osler, of Boston, has been honored by Trinity University, of Toronto, with the honorary degree of Doctor of Civil Law.—Ex.

We are gratified to learn that our friend, Dr. Cunningham Wilson, who has been confined to his home for the past six weeks with typhoid fever, is recovering.

New York City is preparing to build a very large floating bath house at the foot of East Twenty-third street. It will cost $200,000, and will furnish accommodations for 18,000 people.

Jane Toppan, the nurse of Lowell, Mass., has confessed to the killing by poison of thirty-one patients whom she had nursed. She has been pronounced insane, and has been sent to the asylum for life.—Ex.

The action of Celerina on the brain and nervous system is that of an exhilarant, relieving depressions, and lessening irritable nerve conditions. In cases of organic and functional lesions of the heart, an increased steadiness of pulse beat, and diminuition of pulse variation is apparent.

The Birmingham Medical College which is being built on Avenue F., between 19th and 20th streets, will be completed by the first of October, 1902. This is a building and institution of which the medical profession of Birmingham have cause to feel proud.

The grand jury of Chicago has reversed the finding of the coroner's jury in the case of the fire at St. Luke's Hospital, which destroyed the lives of twelve peeople. The coroner's jury found the hospital authorities negligent. The grand jury finds that everything possible was done to save the lives of the patients.—Ex.

The Copeland-Berry Private Infirmary has been enlarged and in many ways improved. Five new rooms have been added to the already large building. The building is supplied with electric fans, electric lights, etc., a new furnace, new and up-to-date sterilizers; everything have been added for the convenience and comfort of patients, and ready for successful work.

The Tri-State Medical Society of Alabama, Georgia and Tennessee, will convene in this city October 7, 1902. Judging from the preliminary program there will be a large number of interesting papers which will be read and discussed at this meeting. The Society will be in session three days, and the medical profession of Alabama is especially invited to attend the meeting and take part in its proceedings.

"It is necessary to prevent, as far as possible, the great coagulating effect that the lab-ferment of the infant's gastric juice has upon the casein of cow's milk; and this is satisfactorily accomplished either by adding an alkili, such as lime water, or some mucilaginous material, such as barley water or Mellin's Food. In this way the casein curd is rendered loose and flocculent, and more like that of human milk."—"Diseases of Infancy"—J. W. Ballantyne, M. D.

Gen. William H. Forwood has succeeded General Sternberg as surgeon-general of the army. General Forwood was appointed assistant surgeon in the army in August, 1861. His services have been long and honorable, including the Civil War, Indian campaigns, the war with Spain, the insurrection in the Philippines, and the expedition in China. He was twice brevetted in the Civil War for faithful and meritorious services. His tenure of office will be short, as he will retire for age in September next.—Ex.

Drs. Davis and Davis are making extensive improvements at their Infirmary. A new modern up-to-date operating room is being built and fitted up in accordance with the most improved and modern requirements, and a number of new rooms are being built and arranged for the accommodation of patients. When completed they will have one of the largest and most complete private Infirmaries in the South

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In a private letter received from Dr. L. G. Woodson, who has been spending several months in Paris, London, and other important medical centres of the old country, we are pleased to learn that his trip abroad has in every way been satisfactory to himself, and judging from the large opportunities which he has had to see the best medical men of the old country and their work certainly must have been a source of much gratification as well as advantage to Dr. Woodson. We are glad to know that the doctor has had a pleasant, satisfactory and profitable trip, and that he will reach home about September the first.

We are just in receipt of volume number one of the "American Gynecology," edited by Charles Jewett, M.D., of New York. Aside from five assistant editors, we note that there are fifty-seven distinguished gynecologists as collaborators. Prominently in this number is our friend, Dr. W. E. B. Davis, of Birmingham, Ala., and Dr. W. D. Haggard ,Jr., of Nashville, Tenn.

The first number of this Journal contains a number of important original articles by leading writers of this country.

The print and make-up of the Journal and the illustrations are in every way first-class. We are glad to place this excellent Journal on our exchange list, and wish for it the greatest degree of success.

A STUDY OF TWENTIETH CENTURY SUCCESS.

In an interesting article with the above caption, Prof. E. G. Dexter[1] has presented a study of how the men and women, who in the opening year of the twentieth century are prominently in the public eye, achieved the success in their various vocations which has placed them there. As a basis for this study he has made use of "Who's Who in America" for 1900? This volume contains the names of 8,602 persons, each of whom has attained a degree of eminence before the public.

It was found that the probability of achieving eminence was in-

1. Popular Science Monthly, July, 1902.

creased more than 5.6 times by a college education, but Dexter does not attribute this advantage entirely to the direct educational effect of such a training, but, to a considerable extent, to the selective influence of the course.

As to the age at which eminence may be reached, he finds that in those callings which presuppose a professional or, at least, an extended preparation, that of scientist seems to promise the earliest recognition. This is perhaps due to the fact that the scientist enters on his lifework with a more complete intellectual equipment than most others, and that during the period of preparation opportunities are offered for research and original investigation which may bring renown before his real lifework is begun. Recognition comes earlier to the physician than to the lawyer or clergyman, because in many cases the same conditions apply to him as to the scientist.

It is of interest to note that the "banner professions," so far as educational accomplishments are concerned, are those of college instructor and medicine. Of the eminent medical men, mentioned in "Who's Who," 42 per cent. have received academic degrees (honorary degrees are not included), while only 6 per cent. have had elementary education alone. Only 7.5 per cent. of the medical students of the country according to the Commissioner of Education, have academic degrees. This would indicate that the probabilities of a physician attaining prominence is nearly six times greater if he has a college training. Dexter considers that it is as scientist and producer, and not as a practitioner of medicine, that the physician is most largely aided by such a training. He also believes that the scientific societies of physicians undoubtedly stimulate more of their members to original research and investigation than do similar organizations among clergymen and lawyers, and it is here that broader training would count for most.

In marked contrast to the medical profession, 40 per cent. of eminent lawyers and 24 per cent. of eminent clergymen have had neither professional training nor academic instruction beyond the high school. Thus, of the three generally recognized learned professions, the medical leads in the breadth and perfection of its educational preparations. If it has been true in the past that eminence in medicine has usually required exceptional general and special education for its attainment, it will be even more so in the future, as the work of the physician, not only as an original worker and investigator, but also as a practitioner, is constantly approaching more nearly that of a pure scientist.—Journal of American Medical Association.